

ABSTRACT OF THE DISCLOSURE

A waveguide of an optical device is formed by a ridge waveguide portion which is formed as a substantially stripe convex portion extending in a guiding direction, and a gain waveguide
5 portion which guides light in a gain region optically coupled with the ridge waveguide portion. An extended portion is formed to extend from the gain waveguide portion in the lateral direction of the waveguide. With this extended portion, an electrode and a pad are connected by a planar structure on the flat surface
10 continuing from the upper surface of the ridge waveguide portion, without using any resin step. A phase shift effect is also obtained in the gain waveguide portion.

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